LYSENKO, T.D.; OL'SHANSKIY, M.A.; SINYAGIN, I.I.; GLUSHCHENKO, I.Ye.; VARDANTSYAN, I.S.; PREZENT, I.I.; SHCHERBINOVSKIY, N.S.; SHUNKOV, V.I.; YEVSTIGNEYEV, S.N.; BOCHEVER, A.M.; LITVIN, V.M.; YAYKOVA, A.T.; PODVOYSKIY, I.I.; SAKS, Ye.I.; KHALIFMAN, I.A.; FERGINSON, N.I.; SHCHEGLOVA, Yu.N.; DLUGACH, G.V.; STERNIN, R.A.; LISOVSKAYA, O.V.; GUBINA, T.I.; ROZENFEL'D, M.I.; TSVETAYEVA, Ye.M.; PARKHOMENKO, Ye.V.; NEYMAN, N.F.

Sofia IAkovlevna Voitinskaia; an obituary. Agrobiologiia no.4:121 Jl-Ag '58. (MIRA 11:9)
(Voitinskaia, Sofi'ia Iakovlevna, 1898-1958)

FEYGINSON, N.I.

A good manual ("Course of lectures on the genetics of farm animals" by A.S. Vsiakikh. Reviewed by N.I. Feiginson). Agrobiologiia no.5:157 S-O '58. (MIRA 11:11)
(Domestic animals) (Genetics) (Vsiakikh, A.S.)

FEYGINSON, N.I., kand. sel'skokhoz. nauk

Two trends in the biological science. Biol. v shkole no.4:75-82 Jl-Ag '59. (MIRA 12:11)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.
(Genetics) (Science--Philosophy)

FEYGINSON, N.I.

Lamarck, Darwin and Haeckel and the present state of the problem concerning the inheritance of acquired properties. Agrobiologiia no.5:722-732 S-O '59. (MIRA 13:2)

1. Kafedra genetiki i selektsii Moskovskogo gosudarstvennogo universiteta.
(Lamarck, Jean Baptiste Pierre Antoine De Monet De, 1744-1829)
(Darwin, Charles Robert, 1809-1882)
(Haeckel, Ernst Heinrich Philipp August, 1834-1919)

FEYGINSON, N.I., kand.sel'skokhoz.nauk

Darwin and modern times. Dokl.Akad.sel'khoz. 24 no.10:3-8
'59. (MIRA 13:2)

1. Kafedra genetiki i selektsii Moskovskogo gosudarstvennogo universiteta imeni M.V.Lomonosova.
(Darwin, Charles Robert, 1809-1882)
(Biology)

FEYGINSON, N.I.

Concerning A. Durrant's and H. Tyson's article. Agrobiologiia no.4:557-558 Jl-Ag '60. (MIRA 13:8)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova, kafedra genetiki i selektsii.
(Flax breeding) (Genetics)

FEYGINSON, N.I.

More about a Durrant's works. Agrobiologiia no.6:830-831 N-D '60.
(MIRA 13:12)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova, kafedra genetiki i selektsii.
(Flax breeding)

FEYGINSON, N.I.

Analysis of the negative results of some experiments in vegetative hybridization. Bot. zhur. 45 no.10:1476-1487 O '60.
(MIRA 13:11)

1. Moskovskiy gosudarstvennyy universitet.
(Grafting)

FURMAN, Alekšey Yevgen'yevich; FEYGINSON, N.I., otv. red.; POMALEN'KAYA, O.T., red.; YERMAKOV, M.S., tekhn. red.

[Origin and formation of the dialectic conception of development in biology] Vozniknovenie i formirovanie dialekticheskoi kontseptsii razvitiia v biologii. Moskva, Izd-vo Mosk. univ., 1961. 282 p. (MIRA 14:8)

(Biology—Philosophy)

OL'SHANSKIY; LYSENKO; NAZARENKO; AVAKYAN; VARUNTSYAN; GLUSHCHENKO; PREZENT; VARENITSA; BALYURA; OZIRSKIY; TOMASHEVICH; SHAIN; TARKOVSKIY; TRET'YAKOV; NOVIKOV; FEYGINSON; TELYATNIKOV; KHALIFMAN; KONSTANTINOVA; SMIRNOV; VOINOV; STEPANOV; SHOSTAK; BALABAN; CHUBASOVA; TKUCHUK

Timofei Ignat'evich Belash. Agrobiologiia no. 3:447-448 My-Je '61.
(MIRA 14:5)
(Belash, Timofei Ignat'evich, 1901-1961)

FEYGINSON, N.

Problem of the exceptional genetic role of deoxyribonucleic acid.
Agrobiologiia no.3:454-472 My-Je '62. (MIRA 15:10)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.
(NUCLEIC ACIDS) (GENETICS)

FEYGINSON, N.I., kand.sel'skokhozyaystvennykh nauk

For materialistic biology. Biol.v shkole no.6:71-79 N-D '62.
(MIRA 16:2)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.
(Genetics)

FEYGINSON, Noy Il'ich; GLUSHCHENKO, I.Ye., akademik, red.; TETYUREVA, I.V., red.; DEYEVA, V.M., tekhn. red.

[Corpuscular genetics] Korpuskuliarnaia genetika; kriticheskii obzor. Moskva, Sel'khozizdat, 1963. 542 p. (MIRA 16:6)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Glushchenko).

(Genetics)

KOMMONER, B. [Commoner, B.], prof. fiziologii rasteniy; FEYGINSON, N.I. [translator]

In defense of biology. Agrobiologiia no.3:351-358 My-Je '63. (MIRA 16:7)

1. Predsedatel' Komiteta po molekulyarnoy biologii Vashingtonskogo universiteta, Sent-Luis, Missuri, SShA.

(Biology--Philosophy)

FEYGINSON, N.I.

Collection on molecular genetics. Agrobiologiia no.6:931-945
N-D '65. (MIRA 18:12)

L 24713-65 EWT(m)/EWA(d)/T/EWP(t)/EWP(k)/EWP(b) Pf-4 AFDC(b)/SSD/AFWL/
[illegible]/AFTC(p) JI/HW
ACCESSION NR: AR5000587 S/0137/[illegible]

[illegible] Metallurgiya. Sv. t., A [illegible]

[illegible]ankovskiy, V. M.; Kheyfets, G. N.; Feygin, [illegible]; [illegible]
[illegible], F.

TITLE: Laboratory vacuum furnace with manipulator

CITED SOURCE: Sb. Proiz-vo trub, vy*p. 12. M., Metallurgiya, 1964, 74-77

TOPIC TAGS: vacuum furnace, vacuum chamber, heat treatment, pipe

TRANSLATION: A horizontal resistance furnace with a manipulator and a cooler in a vacuum chamber was designed and built [illegible] Italian Metallic Research Pipe Instituto for the purpose of obtaining a series of parameters and verifications on the efficiency of heat treatment of pipes under different degrees of vacuum in a vacuum chamber. The furnace body consisted of pipe with [illegible] x [illegible] made of stainless steel rolled into the form of a [illegible] the forward end. On the cover of the body were placed 2 copper conduc-

Card 1/3

tors, 3 heaters, a handle for the door of the furnace, and an arrangement for inserting a thermocouple. The heater, made of molybdenum or a Nichrome type alloy, was placed in the annular gap between two korraks cylinders. These cylinders were strengthened with two face flanges of the same material. The front flange has an opening for inserting the samples into the heating chamber, which has a working volume 20 mm in diameter and 1[illegible] mm [illegible]. The opening is closed by a door with a slot for supporting the sample. The axis of the door passes outside of the external heating baffle, and is led out through a seal in the roof of the furnace body. Two external heating baffles made of stainless sheet steel are fastened to the face clamps of the baffles and are centered relative to the body with six screws. The covering of a stationary thermocouple is placed in the openings of the external baffles. [illegible] the screen there are led two copper conducting rods insulated with [illegible] casings, connected to the heater with a screw joint. The [illegible] is made of copper and is located in the [illegible] furnace. The manipulator is in the form of a "tube within a tube", where the hollow shaft of the manipulator slides [illegible] through the wall of the furnace body and moves the sample with the handle

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ACCESSION NR: AR5000587

the vacuum chamber. Feeding of current to the heater is carried out through an automatic transformer and a reducing transformer. Regulation of the heating up to the desired temperature is effected [illegible] on and off the automatic transformer [illegible] readings of an automatic type PSR-1 potentiometer operating along a tungsten-molybdenum thermocouple. The degree of vacuum in the working chamber is measured with a LT-2 thermocouple and an LM-2 ionizing tube in conjunction with a VNT-1 vacuum meter. A general diagram of the heating apparatus is given, along with a description of the vacuum furnace. The procedure for producing a vacuum is described.

SUB CODE: MM ENCL: 00

Card 3/3

L 3995-66 EWT(m)/EWA(d)/T/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c) JD/HW

ACCESSION NR: AT5022786 UR/3164/64/000/014/0084/0089

AUTHOR: Furs, B. A. (Engineer); Yankovskiy, V. M. (Candidate of technical sciences); Shkurenko, A. A. (Engineer); Paley, B. Ya. (Engineer); Vasilenko, A. Ya. (Engineer); Feyzlin, V. N. (Engineer)

TITLE: Vacuum electrical resistance unit for heat treatment of tubes

SOURCE: Dnepropetrovsk. Vsesoyuznyy nauchno-issledovatel'skiy i konstruktorsko-tekhnologicheskiy institut trubnoy promyshlennosti. Proizvodstvo trub, no. 14, 1964. Sbornik statey po teorii i praktike trubnogo proizvodstva (Collection of articles on the theory and practice of pipe production), 84-89

TOPIC TAGS: steel tube, alloy tube, heat resistant steel, heat resistant alloy, tube heat treatment, vacuum heat treatment

ABSTRACT: An electrical resistance furnace for heat treatment of heat-resistant steel and alloy tubes has been built by the Ukrainian Scientific Research Institute for Tubes. The furnace consists of a vacuum chamber, a vacuum system, a movable tube rack, and a rack pulling mechanism. The vacuum chamber is a cylinder, 500-mm inside diameter and 3000 mm long, with one fixed and one movable end closure. It is made of an austenitic steel. The vacuum system is capable of producing and maintaining a vacuum of $5 \cdot 10^{-5}$ mm Hg. The tube rack can hold one or several tubes

Card 1/2

L 3995-66

ACCESSION NR: AT5022786

up to 40 mm outside diameter and 500—2000 mm long, with a wall thickness of 0.5 to 1.5 mm, or a container filled with small-diameter tubes. In the former case the tubes are heated directly by passing electric current; in the latter case the current is passed through the container. The power is supplied by two single-phase transformers with a secondary voltage range of 14—160 v. The unit insures a temperature of 2000—2300C and heat treats up to 125 tubes per shift, depending on size and material. Orig. art. has: 4 figures. [MS]

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: IE

NO REF SOV: 003 OTHER: 000 ATD PRESS: 4119

Card 2/2

L 04154-67 EWT(m)/T/EWP(t)/ETI IJP(c) JD

ACC NR: AR6016528 SOURCE CODE: UR/0276/65/000/012/B039/B039

AUTHOR: Kheyfets, G. N.; Yankovskiy, V. M.; Kadinova, A. S.; Shkurenko, A. A.; Feyglin, V. N.; Tikhonyuk, A. N.

TITLE: Determining the basic parameters for cooling of gas cylinders during jet annealing

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya, Abs. 12B294

REF SOURCE: Sb. Proiz-vo trub. Vyp. 15. M., Metallurgiya, 1965, 72-79

TOPIC TAGS: liquid gas container, annealing, cooling

ABSTRACT: A method is proposed for studying the process of jet annealing of thick-walled gas cylinders to obtain data necessary for designing jet cooling devices. An experimental laboratory installation is designed and manufactured for individual and simultaneous water-cooling of the outer and inner surfaces of a gas cylinder while it is rapidly rotated to equalize cooling along the perimeter. The schematic diagram and technical characteristics of the experimental installation are given. Practical curves are plotted for cooling along the cross section of the cylinder wall, the rate of flow of the coolant is determined and a method is found for cooling the cylinder wall at the required rate. Heat treatment conditions are established for cylinders made of 40Kh steel. The workpiece is heated to the prequenching temperature of 870°C

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L 04154-67

ACC NR: AR6016528 O

in a batch-type furnace, held at this temperature for 40 minutes, cooled in a bilateral (inside and outside) jet cooling device, annealed at a temperature of 500°C and held at this temperature for 2 hours. It is shown that bilateral cooling gives the cylinder practically identical mechanical properties with respect to length and cross section and that these properties satisfy technical specifications. Schematic diagrams are developed for cooling devices to be used in annealing high-capacity gas cylinders. 6 illustrations, 1 table, bibliography of 3 titles. [Translation of abstract]

SUB CODE: 13

Card 2/2 fld

KHEYFETS, G.N., kand. tekhn. nauk; YANKOVSKIY, V.M., kand. tekhn. nauk; SOKKIN, I.I., kand. tekhn. nauk; KADINOVA, A.S., inzh.; FEYGLIN, V.N., inzh.; TIKHONIUK, A.N., inzh.; SHKURENKO, A.A., inzh.; KHOMENKO, A.G., inzh.

Steam hardening of high-capacity cylinders. Stal' 25 no.8:849-852 S '65. (MIRA 18:9)

L 4951-66 EWT(l)/EWP(e)/EPA(s)-2/EWT(m)/EWP(i)/EWP(b) IJP(c)

ACC NR: AP5025717 SOURCE CODE: UR/0286/65/000/018/0070/0071

AUTHORS: Aslanova, M. S.; Syritskaya, Z. M.; Feykner, S. Ya.

ORG: none

TITLE: Glass. Class 32, No. 174779 announced by State Scientific Research Institute of Glass (Gosudarstvennyy nauchno-issledovatel'skiy institut stekla)

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 18, 1965, 70-71

TOPIC TAGS: glass, dielectric permeability, thermal stability, chemical stability

ABSTRACT: This Author Certificate presents a method for obtaining a glass of high thermal and chemical stability, high dielectric permeability, and low temperature of cooking. The components making up the glass are taken in the following proportions (in wt %): P_2O_5--30-40, TiO_2--51-60, SiO_2--3-6, and less than 2% of N_2O_5.

SUB CODE: MT/ SUBM DATE: 02Nov64

Card 1/1 UDC: 666.112.92:546.18

0901 1587

L 35922-66 EWT(m)/EWP(e) WW/WH

ACC NR: AP6012132 (A) SOURCE CODE: UR/0413/66/000/007/0051/0051

INVENTOR: Aslanova, M. S.; Syritskaya, Z. M.; Feykners, S. Ya.; Zak, A. F.; Khomutov, A. I.

ORG: none

TITLE: Glass. Class 32, No. 180317 [announced by All-Union Glass Fiber Research Institute (Vsesoyuznyy nauchno-issledovatel'skiy institut steklyannogo volokna)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 7, 1966, 51.

TOPIC TAGS: glass, glass composition, GLASS FIBER, GLASS PROPERTY

ABSTRACT: An Author Certificate has been issued describing the composition of glass containing P_2O_5, SiO_2, TiO_2, Al_2O_3, MgO, which is intended for the manufacture of glass fiber. To produce a fiber with high absorption properties, the following wt. (%) of the above components are suggested: P_2O_5, 40.0—55.0; SiO_2, 32.0—43.0; TiO_2, 4.0—6.0; Al_2O_3, 3.0—8.0; MgO, >1.0; and CaO, 3.0—5.0. [LD]
[Translation of abstract]

SUB CODE: 11/ SUBM DATE: 12Feb65

Card 1/1

L 20633-66 EWT(n)/EWP(e) WH/WW

ACC NR: AP6011225 SOURCE CODE: UR/0413/66/000/006/0062/0062

INVENTOR: Aslanova, M. S.; Syritskaya, Z. M.; Feykners, S. Ya.

ORG: none

TITLE: Chemical- and heat-resistant glass. Class 32, No. 179885. [announced by All-Union Scientific Research Institute of Glass Fiber (Vsesoyuznyy nauchno-issledovatelskiy institut steklyannogo volokna)

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 6, 1966, 62

TOPIC TAGS: chemically resistant glass, heat resistant glass, glass fiber

ABSTRACT: An Author Certificate has been issued for chemical- and heat-resistant glass for the manufacture of glass fibers resistant to aluminum phosphate binder. The glass has the following composition: P_2O_5, 22—32%; TiO_2, 64—88%; SiO_2, 1—4%; Nb_2O_5, not over 2%. In addition to these ingredients the glass contains: Cr_2O_3, 1—4%; WO_3, not over 1%. [BO]

SUB CODE: 11/ SUBM DATE: 19Feb65/ ATD PRESS: 4225

Card 1/1 UDC: 666.112.92:546.18'28'78'82'882

BRUKER, Z.I.; FEYLER, A.O.; KASHIROV, V.A.

Using semiconductor thermistors with resistance thermometers in measuring and regulating temperatures in dies. Izm. tekh. no.3: 56-58 My-Je '57. (MLRA 10:8)
(Thermometry) (Thermistors) (Die casting)

FEYLER, G.O., inzhener; VIL'MAN, B.P., inzhener.

Wear resistance of disk brakes built into electric motors.
Vest.elektroprom. 27 no.11:60-64 N '56. (MLRA 9:12)

1. Zavod "Dinamo."
(Electric motors) (Brakes)

FEYLER, G.O.

8(2) PHASE I BOOK EXPLOITATION SOV/1855

Soveshchaniye po elektricheskim kontaktam. Moscow. 1956.

Elektricheskiye kontakty; trudy soveshchaniya (Electrical Contacts; Transactions of the Conference) Moscow, Gosenergoizdat, 1958. 303 p. 4,150 copies printed.

Editorial board: B.S. Sotskov (Resp. Ed.), V.V. Usov, R.S. Kuznetsov, I.Ye. Dekabrun, and Z.S. Kirillova; Ed.: I.Ye. Dekabrun; Tech. Ed.: K.P. Voronin.

PURPOSE: This collection of articles is intended for engineers and technicians designing, developing and operating electrical apparatus and is concerned with electric contact materials. It may also be useful in scientific research institutes and laboratories.

COVERAGE: This book comprises reports delivered at the Electric Contacts Conference held in Moscow in November, 1956. These papers cover physical processes occurring during connecting or disconnecting, methods of designing and testing electric contacts, production and characteristics of contact materials. During this conference of the Institut avtomatiki telemekhaniki AN SSSR (Institute of Automation and Telemechanics, Academy of Sciences, USSR) participants approved periodic conferences of physicists, metallurgists, chemists and apparatus design specialists to discuss problems of electric contacts, which are the components of electric apparatus primarily influencing the reliability of electric systems, especially d-c control systems. Their physical, thermal, mechanical and chemical processes have still not been well analyzed. References are given at the end of most of the reports.

II. DESIGN : APPLICATION AND TESTING METHODS

Feyler, G.O. (Zavod "Dinamo," Moscow - Moscow "Dinamo" Plant) Wear Resistance of Contacts in D-c Contactors and Controllers 138

The author describes the method of testing wear resistance of contacts at the "Dinamo" Plant in Moscow and proposes that all other plants adopt this method as a standard one to enable the comparison of test results.

Gordon, A.V. Methods of Testing the Resistance to Wear of Electric Contacts in Aircraft D-c Contactors 148

The author reports the results of work he carried out along with engineers K.V. Isayev, M.A. Pruser, V.F. Simonova. He describes the method applied for testing aircraft Dc contacts. This method permits approximating testing conditions with real operating conditions. He suggests applying this method for testing contactors of general industrial use.

Pike, V.I., and M.A. Gurevich. (Zavod "ATE-1 "-Moscow "ATE-I" Plant) Contacts of Vibrator Voltage Regulators 156

The authors summarize the results of investigations they carried out in the Electric Machine Laboratory of the "ATE-I" Plant along with Engineers Ye.K. Shvedov, V.I. Khrunin, Ya.M. Levit, L.B. Bayer, R.Y. Gorelov, O.G. Suchkova on operating conditions of contacts in vibrator voltage regulators of automobile generators, on the design of contact fittings and on various pairs of contact metals.

III. PRODUCTION AND CHARACTERISTICS OF CONTACT MATERIALS 172

Al'tman, A.B., I.P. Melashenko, and E.S. Bystrova (Nauchno-issledovatel'skiy institut elektrotekhnicheskoy promyshlennosti - Scientific-Research Institute for the Electrical Industry) Modern Sintered-Metal Electric Contacts. 172

Sintered metals are presently the most suitable materials for arcing tips of high-duty circuit-breakers. The authors explain the technical requirements, describe the structure of the compositions, methods of production, characteristics and applications.

Frantsevich, I.N., and O.K. Teodorovich. (Institut Metallokeramiki i Spetsial'nykh Splavov AN USSR - Institute for Sintered Metals and Special Alloys, UkrSSR Academy of Sciences) Production Methods of Sintered-Metal Electric Contacts 186

The authors describe the results of their investigation of the comparison of various methods of producing sintered metals.

Usov, V.V. and Murav'yeva, Ye.M. (Nauchno-issledovatel'skiy institut elektrotekhnicheskoy promyshlennosti - Scientific-Research Institute for the Electrical Industry) Thermochemical Method for Production of Contact Compositions. 199

[illegible]unization of alloys at higher temperatures results in structure similar to that obtained by the sintered metal power method. The authors explain this thermochemical method and its advantages.

Al'tman, A.B., and E.D. Bystrova. (Scientific-research Institute for the Electrical Industry) Internal Structure of Wear-resistant Electric Contacts 214

The authors discuss their investigation of the influence of internal structure of heterogeneous materials on wear resistance. They paid special attention to the alloys Ag-Cu, Ag-Si-Mg, and Ag-Al.

Card 8/11

FEYLER, G. O.

AUTHOR: Feyler, G.O., Engineer 110-58-5-1/25

TITLE: The Resistance to Wear of the Contacts of Direct-current Contactors and Controllers (Iznosoustoychivost' kontaktov kontaktorov i kontrollerov postoyannogo toka)

PERIODICAL: Vestnik Elektropromyshlennosti, 1958, Vol 29, Nr 5, pp 1 - 4 (USSR).

ABSTRACT: During the last two years, the apparatus laboratory of the Dinamo Works has tested the resistance to wear of different contact materials. The tests were made on direct-current contactors; the main technical data are in Table 1. The following materials were tested:
a) Contacts based on silver; silver (S), silver with cadmium oxide (OK or SOK), silver with nickel (SN);
b) Contacts based on copper: copper (M), oxygen-free copper (MB), cadmium copper (MK), copper with cadmium oxide (OK-M), copper with cadmium oxide and added silver (S-OK-M), copper with iron (Zh-M), copper with tungsten (V-M).
The tests showed that the main factors governing the wear are: the current, the intensity of magnetic blow-out, the time that the arc is on the contacts and the vibration of the contacts. If the voltage is above 50 - 100 V, it has little effect on wear and so the tests were made at the minimum standard voltage

Card1/5

The Resistance to Wear of the Contacts of Direct-current Contactors and Controllers

of 100 - 120 V. If magnetic blow-out is used, load inductance has little influence on contact wear when contacts are opened. However, when a d.c. circuit is closed the lower the inductance the greater the rate of rise of the current to its final value and, therefore, the greater the wear.
Tests on contact materials are best made on the actual apparatus. This has the additional advantage that simultaneous tests can be made on other parts of the equipment but the inductance and voltage of the circuit must then be of normal value. Contact wear is best estimated by loss of weight or volume for one opening and closing of the circuit. This value is called the specific wear. The relative resistance to wear of a material is defined as the ratio of the specific wear of that material to the specific wear of the reference base material, silver or copper. Wear resistance is, of course, not the only important factor in selecting contact material; in particular, the contact resistance should be low and stable. The material should also possess high resistance to contact welding.
The results of wear-resistance determination on contact materials

The Resistance to Wear of the Contacts of Direct-current Contactors and Controllers

using a contactor type KPD-103 are given in Table 2. The tests were conducted by Engineer S.A. Shterenberg and Engineer I.S. Gorchakova. The contactor made and broke a current of 150 A at 220 V; the circuit inductance was 25 mH. The operating rate was 400 per hour and the arc remained on the contacts for 2 - 5 millisecs. From the results, it is concluded that contacts SOK have the highest resistance to wear and are six times better than copper. Silver contacts wear almost twice as much as SOK contacts. Cadmium-copper contacts are the best among those based on copper.

Table 3 gives wear test results on contact materials using different types of contactor. In all cases the temperature of the contacts during the tests was 70 - 80 °C. Table 4 gives the results of tests on the same materials operating under the following different conditions: a) making and breaking a current of 150 A; b) making a current of 375 A and breaking 150 A. The arc was on the contacts for 2 - 5 milliseconds. From the results it is concluded that: a) when making 2.5 times rated current contact wear

 increases by about 30%. With different contactors, the

The Resistance to Wear of the Contacts of Direct-current Contactors and Controllers

specific wear of contacts ranges from 17 - 30 μg, hence good design may double contact life. Contacts OK-15 are worse than contacts SOK.

A graph of the relationship between the specific wear of contacts and the contactor current is shown in Fig.1. In this case rated current is made and broken; different types of contactor were used for the lower and higher points on the curves. Table 5 gives the results of tests of contact materials on the direct-current controller type NP-150. It will be seen from this table that the resistance to wear of the controller contacts is much worse than that of the contactor contacts.

In order to verify the stability of operation of contacts, after every 50 000 operations, determinations were made of the temperature rise and contact resistance when rated current is passed for 6 hours. Heating-test results on contactor type KPD-103 are given in Figure 2. Contact resistance at the end of heating tests are given in Table 6. The contacts were not clean. The heating of worn contacts was of the same order in copper and silver contacts.

Card4/5 Contacts with a high content of tungsten have very high

The Resistance to Wear of the Contacts of Direct-current Contactors and Controllers

contact resistance and they heat excessively after repeated short-time operation. There are 2 figures and 6 tables.

ASSOCIATION: Zavod "Dinamo" (Dinamo Works)

SUBMITTED: August 28, 1957

KALINKIN, Vladimir Sergeyevich; FEYLER, Georgiy Oskarovich; SINAYSKIY, M.M., red.; SHIKIN, S.T., tekhn.red.; BORUNOV, N.I., tekhn.red.

[Hoisting electromagnets] Gruzopod"emnye elektromagnity. Moskva, Gos.energ.izd-vo, 1960. 31 p. (MIRA 14:1)
(Hoisting machinery) (Electromagnets)

KALINKIN, Vladimir Sergeyevich; FEYLER, Georgiy Oskarovich; TAYTS, A.A., red.; VAGIN, A.A., red. izd-va; ISLENT'YEVA, P.G., tekhn. red.

[Electromagnets for electric cranes]Pod"emnye elektromagnity. Moskva, Metallurgizdat, 1962. 87 p. (MIRA 16:2)
(Electric cranes) (Electromagnets)

BELEN'KIY, G.I.; BREYTER, M.Ye.; IVANOV, V.M.; KALINKIN, V.S.; KOZHUSHKEVICH, V.G.; PETRAKOVSKIY, V.M.; RABINOVICH, A.A.; RUBINSKIY, I.A.; SINAYSKIY, M.M.; FEYLER, G.O.; KHOROSHILKIN, L.L.; KOMAR, M.A., red.; BUL'DYAYEV, N.A., tekhn. red.

[Electrical equipment of cranes] Elektricheskoe oborudovanie kranov. Moskva, Gosenergoizdat, 1963. 399 p. (MIRA 16:12)

1. Kollektiv inzhenerov moskovskogo zavoda "Dinamo" imeni S.M.Kirova (for all exept Komar, Bul'dyayev).

(Cranes, derricks, etc.--Electric equipment)

FEYMAN, I. I.

23373 Iz Istorii Razvitiya Otechestvennoy l'nyanoy Promyshlennosti. Tekstil. Prom-st', 1949, No. 6, c. 6-7.

SO: LETOPIS NO. 31, 1949

FEYMAN, I.I.

FEYMAN, I.I.; ZERNOVA, Ye.I.

Processing ramie fiber on flax spinning equipment. Tekst.prom. 14 no.6:26-29 Je '54. (MLRA 7:7)

1. Dotsent Kostromskogo tekstil'nogo instituta (for Feyman)
2. Zaveduyushchaya pryadil'noy fabrikoy l'nokombinata im. Lenina (for Zernova)
(Ramie) (Spinning machinery)

FEYMAN, I.I., dotsent; ZERNOV, B.L.; ZERNOVA, Ye.I., inzhener

Hemp processing on flax-spinning machinery. Tekst.prom.15 no.7:14-16 Jl'55. (MLRA 8:11)

1. MTI (for Feyman) 2. Zaveduyushchiy TSentral'no-nauchnoy issledovatel'skoy laboratorii Glavl'na (for Zernov) 3. Kostromskiy l'no-kombinat imeni Lenina (for Zernova).
(Hemp)

FEYMAN, I.I., kand. tekhn. nauk, dots.

Relation of yarn diameter to its number and twist. Izv. vys. ucheb. zav.; tekh. tekst. prom. no.1:27-34 '58. (MIRA 11:5)

1. Kostromskoy tekstil'nyy institut.
(Yarn--Tables, calculations, etc.)

FEYMAN, I.I., kand.tekhn.nauk; GRUBOV, A.F.; GAGOROCHKINA, M.K., studentka; MYASNIKOVA, N.V., studentka

Choosing optimum weft twists for burlap fabrics. Tekst.prom. 18 no.5:70-71 My '58. (MIRA 11:5)

1. Glavnyy inzhener Narvskoy l'no-dzhutovoy fabriki (for Grubov).
2. Kostromskoy tekstil'nyy institut (for Gagarochkina, Myasnikova).
(Burlap)

GINZBURG, Lev Natanovich, prof.; DVERNITSKIY, Iosif Melent'yevich, inzh.; TARASOV, S.V., retsenzent; SLUTSKOV, I.K., retsenzent; FEYMAN, I.I., retsenzent; LYASHENKOV, I.K., retsenzent; VOLGIN, [illegible], retsenzent; GORDEYCHIK, G.M., red.; SOKOLOVA, V.Ye., red.; MEDVIHDEV, L.Ya., tekhn.red.

[Spinning of bast fibers and the manufacture of twisted products] Priadenie lubianykh volokon i proizvodstvo kruchenykh izdelii. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po legkoi promyshl., 1959. 549 p. (MIRA 12:8)

1. Kafedra pryadeniya l'na KTI (for Slutskov, Feyman, Lyashenkov, Volgin).

(Bast) (Cordage)

FEYMAN, I.I., dotsent

Functional relation of strength indices, number and degree of twist for linen yarn. Izv.vys.ucheb.zav.; tekh.tekst.prom. no.1:41-50 '59. (MIRA 12:6)

1. Kostromskoy tekstil'nyy institut.
(Yarn--Testing) (Linen)

SAL'MAN, Semen Il'ich; LERMAN,D.I., retsenzent; ZUBCHANINOV,V.V., retsenzent; FEYMAN,I.I., retsenzent; KOPELEVICH,Ye.I., red.; SHAPENKOVA,T.A., tekhn.red.

[Planning and design of flax-spinning factories] Proektirovanie l'nopriadil'nykh fabrik. Pod red. D.I.Libermana. Moskva, Izd-vo nauchno-tekhn.lit-ry RSFSR, 1960. 315 p. (MIRA 14:4)

(Flax) (Textile factories)

FEYMAN, I.I.

Problems in yarn construction. Izv.vys.ucheb.zav.; tekh.tekst. prom. no.6:149-151 '60. (MIRA 14:1)

1. Kostromskoy tekstil'nyy institut.
(Yarn)

FEYMAN, I.I.

Relationship between the clamping length and strength of yarn. Izv. vys. uchob. zav.; tekh. teks. prom. no. 2:17-23 '61. (MIRA 14:5)

1. Kostromskoy tekstil'nyy institut.
(Yarn--Testing)

FEYMAN, I.I.

Designing the fittings of preparatory and carding machinery of the flax, hemp, and jute industry. Izv.vys.ucheb.zav.; tekh. tekst.prom. no.3:50-56 '61. (MIRA 14:7)

1. Kostromskoy tekstil'nyy institut.
(Textile machinery)

FEYMAN, I. I.

Debatable problems in the methods of calculating the tensile strength of products made with fibrous materials. Izv. vys. ucheb. zav.; tekh. tekst. prom. no.4:26-31 '62. (MIRA 15:10)

1. Kostromskoy tekhnologicheskiy institut.

(Yarn)

FEYMAN, I.I.

Comparison analysis of formulas proposed for the strength calculation of rayon cord. Izv.vys.ucheb.zav.; tekh.tekst.prom. no.1:27-33 '63. (MIRA 16:4)

1. Kostromskoy tekhnologicheskiy institut.
(Rayon spinning) (Tire fabrics)

FEYMAN, I.I.

Comparison analysis of the formulas proposed for the calculation of the strength of acetate and viscose yarns. Izv. vys. ucheb. zav.; tekh. tekst. prom. no.6:18-21 '63
(MIRA 17:8)

1. Kostromskoy tekhnologicheskiy institut.

TIMOKHOV, Ye.P.; FEYMAN, M.G.

Weatherometer for rapid testing for light and weather fastness.
Lakokras.mat.i ikh prim. no.6:85-86 '62. (MIRA 16:1)
(Paint--Testing)

FEYMAN, Ye. A.

Feyman, Ye. A. - "All-Russian Conference on Directing the Professorship of Biological Sciences, (Pedagogical and teaching institutions, October 1948)," Yestestvoznaniye shkole, 1949, No. 6, p. 80-84

SO: U-3600, 10 July 53, (Letopis 'Zhurnal 'nykh Statey, No. 6, 1949).

FEYMAN, Ye. A.

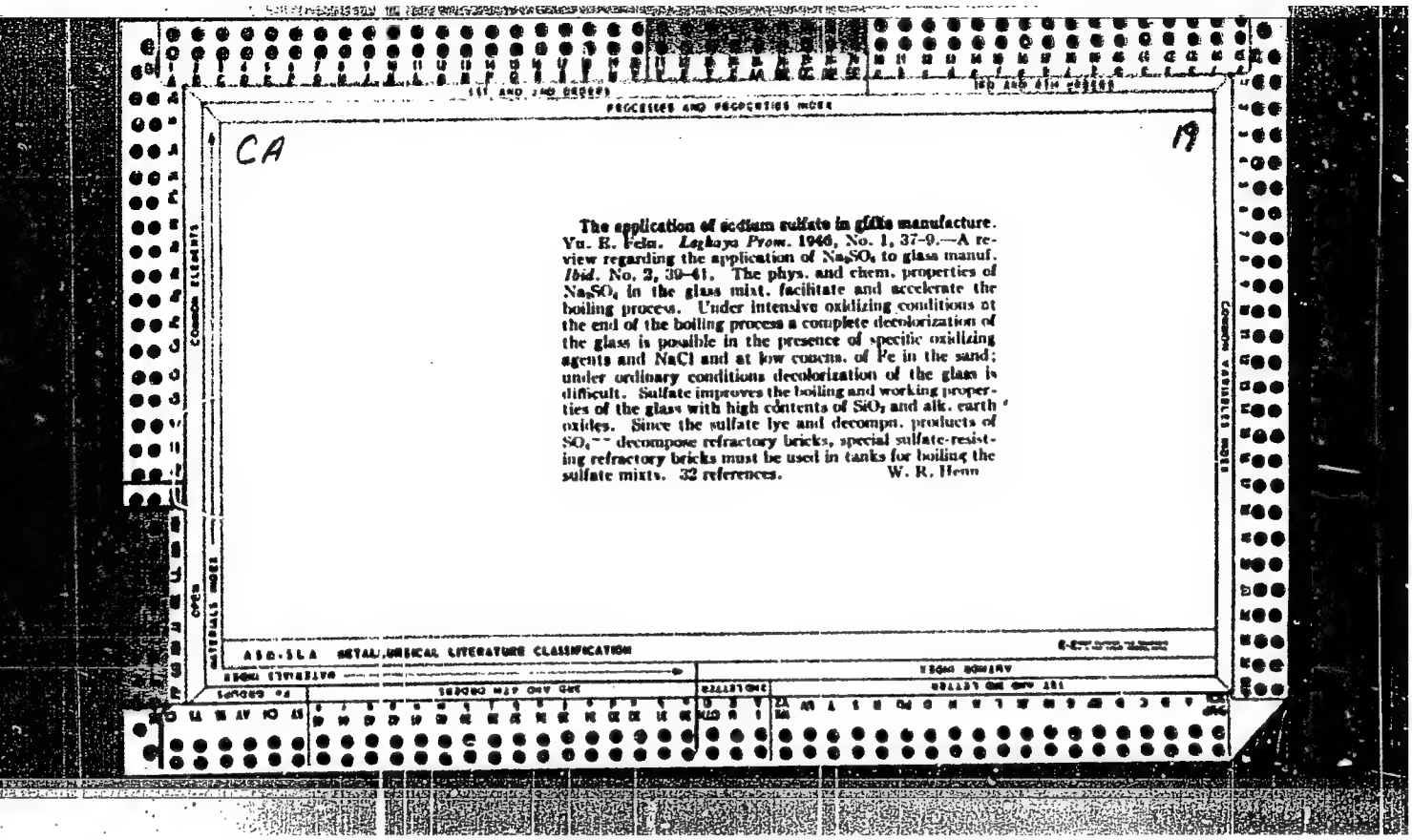
"At the Conference of Biology Teachers of Moscow Province," Est. v shkole, No.4, 1952.

FEYFAN, YE.A.

FEYMAN, Ya.A.

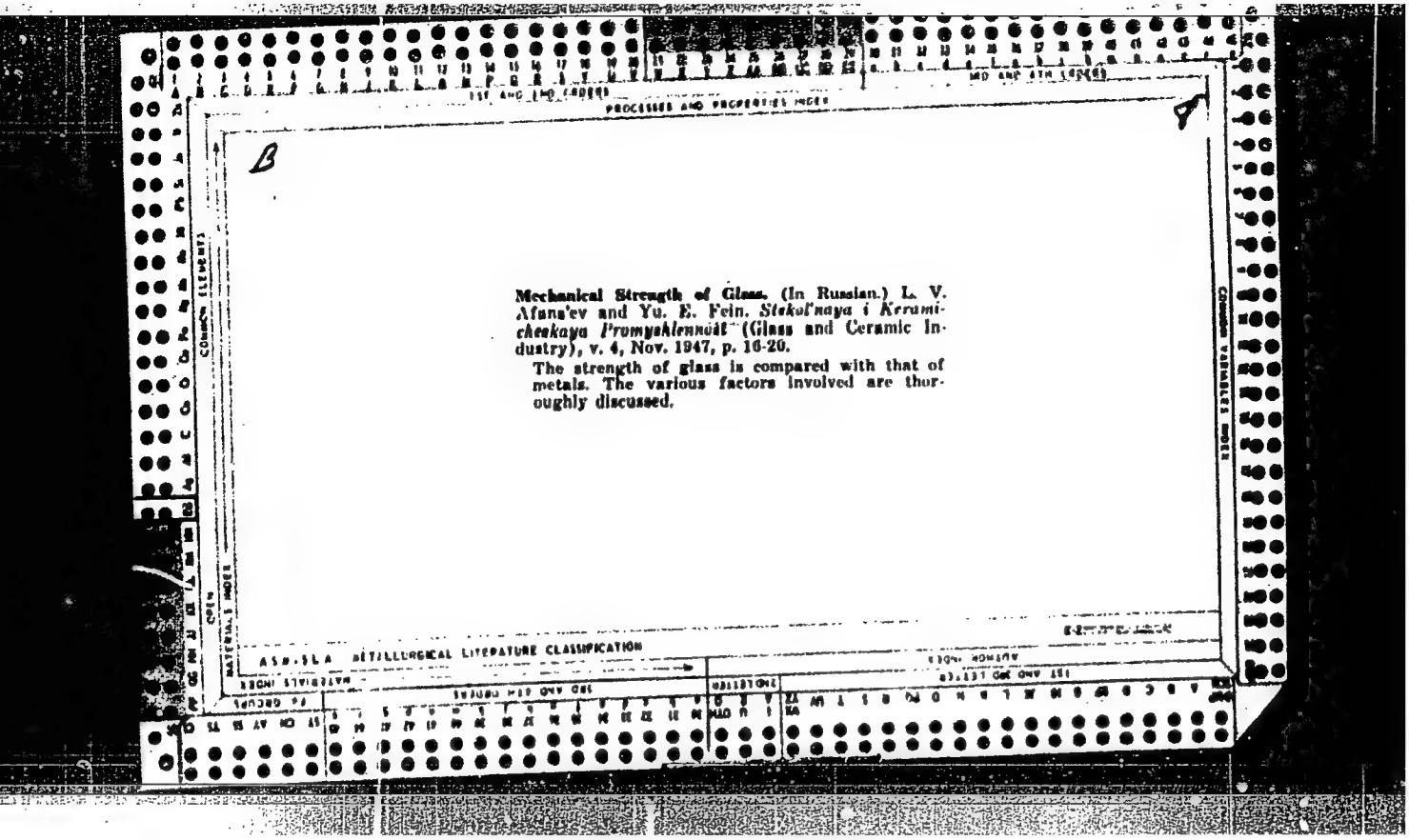
At the republic "Pedagogical lectures." Biol.v shkole no.2:93-95 Mr-Ap '57. (MLRA 10:5)

(Biology--Study and teaching)



CA 19

The application of sodium sulfate in glass manufacture. Yu. E. Fela. *Leghaya Prom.* 1940, No. 1, 37–9.—A review regarding the application of Na_2SO_4 to glass manuf. *Ibid.* No. 2, 39–41. The phys. and chem. properties of Na_2SO_4 in the glass mixt. facilitate and accelerate the boiling process. Under intensive oxidizing conditions at the end of the boiling process a complete decolorization of the glass is possible in the presence of specific oxidizing agents and NaCl and at low concns. of Fe in the sand; under ordinary conditions decolorization of the glass is difficult. Sulfate improves the boiling and working properties of the glass with high contents of SiO_2 and alk. earth oxides. Since the sulfate lye and decompn. products of SO_4^{--} decompose refractory bricks, special sulfate-resisting refractory bricks must be used in tanks for boiling the sulfate mixts. 32 references. W. R. Henn



Mechanical Strength of Glass. (In Russian.) L. V. Afana'ev and Yu. E. Fein. *Steklo'naya i Keramicheskaya Promyshlennost'* (Glass and Ceramic Industry), v. 4, Nov. 1947, p. 16-20.

The strength of glass is compared with that of metals. The various factors involved are thoroughly discussed.

FEYN, Yu.E.

Raw materials, supplies and the preparation of batches in glass manufacture. Leg.prom. 7 no.8:29-32 Ag '47. (MLRA 6:11)
(Glass manufacture)

FEIN Yu. E.

V

MECHANICAL STRENGTH OF GLASS, L. V. Afanas'ev and Yu. E. Fein, Stekol'naya i Keram. Prom., 1947, No. 11, pp. 16-20; No. 12, pp. 18-22, -- The literature is reviewed through 1946. No references are cited. B.Z.K.

FEYN, Yu. [redacted]

"Expansion of cement during hydration ("Zement-Kalk-Gips", 1954, no.3. p. 92-95)." Reviewed by IU.Fein. TSement 21 no.1:31-32 Ja '55. (MIRA 8:4)
(Cement)

FEYN, Yu.

"A rotary kiln, operating on the wet production method, and fed with argilaccous raw material through a fuel nozzle ("Zement-Kalk-Gips", 1954, no.3, p 75)." E.Shott. Reviewed by IU.Fein. TSement 21 no.1: 32 Ja '55. (MLRA 8:4)

(Cement kilns)

FEYN,Yu., ref.; KOCHANOVA,Ye.B., ref.; DRABKIN,G.S., ref.

From the pages of journals. TSement 21 no.4:29-32 Ag'55.
(Cement industries) (MLRA 8:11)

FEYN, Yu.

Optimum parameters for the design of tank furnaces (From "Journal of the Canadian Ceramic Society" no.23, 1954). Leg.prom.16 no.2:54-55 F '56. (Glass manufacture) (MLRA 9:7)

FEYN, Yu.

Developing new methods for cooling the molds on machines manufacturing glass containers. (From "Glastech. Berichte" no. 9, 1955). Leg. prom. 16 no.7:54-55 Jl '56. (MLRA 9:10)

(Glass manufacture)

FEYN, Yu.

Convection channel annealing furnaces with electric heating. (From "Ceramic Industries" no. 7, 1955). Leg. prom. 16 no.7: 55 Jl '56. (MLRA 9:10)

(Glass manufacture) (Electric furnaces)

FEYN, Yu., referent.

Glass manufacture (from "Canadian Ceramic Society", no.23, 1954, "Szklo i ceramiakn", no.4, 1955, "Silikattechnik", no.2, 1955). Leg. prom. 17 no.5:56-57 My '57. (MLRA 10:6)
(Glass manufacture)

FEYN, Yu., referent.

Electrochemical engraving of glass (from "Scientific Instruments" no.6, 1954). Leg.prom. 17 no.6:3 of cover Je '57. (MLRA 10:8)
(Electrochemistry, Industrial)
(Glass cutting)

FEYN, Yu.E., referent.

State of glass container production techniques in the German Federal Republic (from "Sprechsaal" no.1, 1957). Leg. prom. 17 no.10:52-3 of cover O '57. (MIRA 10:12)
(Germany, West--Glass manufacture)

SOV/131-59-1-10/12

15(2)
AUTHOR: Feyn, Yu. E., Abstracter

TITLE: Elasticity and Strength of Refractory Concretes at Different Temperatures (Uprugost' i prochnost' ogneupornykh betonov pri raznykh temperaturakh)

PERIODICAL: Ogneupory, 1959, Nr 1, pp 48-48 (USSR)

ABSTRACT: This is an abstract of an English paper by S. Schneider published in the Journ. Amer. Ceram. Soc., 1958, Nr 1, pp 27-32.

Card 1/1

15(2)

AUTHOR: Feyn, Yu. E.

SOV/131-59-2-12/16

TITLE: Improvement of the Properties of Calcium-Aluminate Cements (Uluchsheniye svoystv kal'tsiy-alyuminatnykh tsementov)

PERIODICAL: Ogneupory , 1959, Nr 2, pp 92-92 (USSR)

ABSTRACT: This is an abstract of an English-language paper published in the Journ. Amer. Ceram. Soc., 1957, Nr 5, pp 158. The abstracter is W. Gitzen.

Card 1/1

FEYN, Yu.E., referent

"Elasticity and strength of refractory concrete at various temperatures" (from "Journ. Amer. Ceram. Soc." no.1, 1958). Ogneupory 24 no.1:47 '59. (MIRA 12:1)

(United States--Concrete--Testing)

REMPEL', A.M.; SUKHOV, P.V.; KOPEYKIN, A.A., glavnyy red.; ROKHVARGER, Ye.L., zamestitel' glavnogo red.; VASYUTINSKAYA, A.A., red.; GARTSMAN, B.M., red.; ZAYONTS, R.M., red.; LUNDINA, M.G., red.; NOSOVA, Z.A., red.; PETROV, N.A., red.; RIVKIN, A.M., red.; ROMANOV, P.R., red.; SOKOLOV, P.V., red.; FEYN, Yu.E., red.; KOSYAKINA, Z.K., red.; KASIMOV, D.Ya., tekhn.red.

[Research on clay materials] Issledovanie glinistogo syr'ia. Moskva, Gosstroiizdat, 1963. 119 p. (Kuchino. Gosudarstvennyi nauchno-issledovatel'skii institut stroitel'noi keramiki. Trudy, no.22). (MIRA 17:3)

ROGOVSKIY, Leon Vladislavovich, inzh.; FEYNBERG, Grigoriy Mikhaylovich, inzh. [deceased]; AMTRUSHIN, B.D., inzh., nauchnyy red.; GORDEYEV, P.A., red.izd-va; GUSEVA, S.S., tekhn.red.

[Quarries and the processing of rock materials] Kar'ery i obrabotka kamennykh materialov. Moskva, Gos.izd-vo lit-ry po stroit. i arkhit. 1957. 199 p. (MIRA 11:3)
(Quarries and quarrying)

FEYNBERG, S.M.

Feinberg, S. M. The principle of limiting stress. [illegible] 12 63 [illegible] 1948

[illegible] concerned with applications of [illegible] literature, is [illegible] the principle of the intelligence of the material [illegible] admissible states of stress [illegible]

[illegible] formulates his principle as follows [illegible] of stress, then one of these is actually realized [illegible] state. (This principle is supposed to hold independently of the manner in which the loads have been brought up to their given values.) With each admissible state [illegible] the author [illegible]

[illegible] the stresses [illegible] violating the yield condition [illegible] limiting stress is accepted, the safety [illegible] of A for all admissible states of stress. [illegible] example, the octahedral shearing stress σ_0 is accepted as the yield criterion, the "deviation of a given state of stress from [illegible]" is defined as the maximum value of σ_0 for this state [illegible]. The state of stress which furnishes the safety factor is then characterized as that admissible state of stress

Source: Mathematical Reviews, Vol 1[illegible], No. [illegible]

FEYNBERG, S.M.

[Heterogeneous methods for designing reactors. Survey of results and comparison with experiments] Geterogennye metody rascheta reaktorov. Obzor rezul'tatov i sravnenie s eksperimentom. Moskva, 1955. 44 p. (MIRA 12:10)

(Nuclear reactors)

FGKWBCG, SM

2

The uranium-water lattice theory. S. M. Feinberg. *Sessiya Akad. Nauk S.S.S.R. po Mirnomu Ispol'zovaniyu Atomnoi Energii, Zasedaniya Otdel. Fiz.-Mat. Nauk* 1955, 185–214(English summary, 214–16).—Math. The theoretical investigation of the fast fission factor, μ, is based on an analysis of the kinetic equation for neutrons. For a homogeneous H_2O-U mixt. μ can be expressed by the approximate formula $\mu_{hom.} - 1 = (\mu_{as} - 1)(1 - \gamma)$, where μ_{as} (about 1.2) is the fast multiplication factor in pure U^{238} and $\gamma = V_{H_2O}/(V_{H_2O} + V_s)$ = the vol. concn. of H_2O in the mixt. The formula is still valid for a U-H_2O lattice with U slugs of less than 1 cm. in diam. μ is higher if the lattice consists of alternate layers of U plates and H_2O. The exptl. results agree satisfactorily with the values derived from formulas. For homogeneous mixts. of U and H_2O one can obtain also from the kinetic equations (the square c, the length of the slow-down τ. Werner Jacobson

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PM

FEYNBERG, S.M.

AUTHOR: FEYNBERG, S.M. (Moscow)

TITLE: Plastic Flow of a Flat Shell in the Axial-symmetric Problem (Plasticheskoye techeniye pologoy obolochki dlya osesimmetrichnoy zadachi). 40-4-12/24

PERIODICAL: Prikladnaya Mat.i Mekh., 1957, Vol.21, Nr 4, pp.544-549 (USSR)

ABSTRACT: The present paper of the author is a part of his thesis (Mechanical Institute of the Academy of Sciences of the USSR, Moscow 1946) on the principle of the limit stress which was also treated by him in a preceding paper (Prikladnaya Mat.i Mekh.12, 1, 1948). This principle now is used for the investigation of the plastic flow of a very flat axial-symmetric shell under uniformly distributed stress and freely resting on along the periphery. The applied hexagonal approximation gives the error ± 7,5% for the determination of the limit stress.

SUBMITTED: July 15, 1956

AVAILABLE: Library of Congress

CARD 1/1

GELFAND, I. M., FEYNBERG, S. M., FROLOV, A. S. and CHENTSOV, N. N.

"Concerning the Use of the Random Test Method (Monte-Carlo Method) for Solving the Kinetic Equation."

paper to be presented at 2nd UN Intl. Conf. on the Peaceful uses of Atomic Energy, Geneva, 1 - 13 Sept 1958.

FEYNBERG, S.M.

21(4)

PHASE I BOOK EXPLOITATION. SOV/2583

International Conference on the Peaceful Uses of Atomic Engergy. 2nd, Geneva, 1958.

Doklady sovetskikh uchenykh; yadernyye reaktory i yadernaya energetika. (Reports of Soviet Scientists; Nuclear Reactors and Nuclear Power) Moscow, Atomizdat, 1959. 707 p. (Series: Its: Trudy, vol. 2) Errata slip inserted. 8,000 copies printed.

General Eds.: N.A. Dollezhal, Corresponding Member, USSR Academy of Sciences, A.K. Krasin, Doctor of Physical and Mathematical Sciences, A.I. Leypunskiy, Member, Ukrainian SSR Academy of Sciences, I.I. Novikov, Corresponding Member, USSR Academy of Sciences, and V.S. Fursov, Doctor of Physical and Mathematical Sciences; Ed.: A.P. Alyab'yev; Tech. Ed.: Ye. I. Mazel'.

PURPOSE: This book is intended for scientists and engineers engaged in reactor designing, as well as for professors and students of higher technical schools where reactor design is taught.

COVERAGE: This is the second volume of a six-volume collection on the peaceful use of atomic energy. The six volumes contain the reports presented by Soviet scientists at the Second International Conference on Peaceful Uses of Atomic Energy, held from September 1 to 13, 1958 in Geneva. Volume 2 consists of three parts. The first is devoted to atomic power plants under construction in the Soviet Union; the second to experimental and research reactors, the experiments carried out on them, and the work to improve them; and the third, which is predominantly theoretical, to problems of nuclear reactor physics and construction engineering. Yu. I. Koryakin is the science editor of this volume. See SOV/2081 for titles of all volumes of the set. References appear at the end of the articles.

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TEYNBERG S.M.

21(1)

PHASE I BOOK EXPLOITATION SOV/2583

International Conference on the Peaceful Uses of Atomic Energy..
2nd, Geneva, 1958.

Doklady sovetskikh uchenykh; fizicheskiye reaktory i yadernaya energetika. (Reports of Soviet Scientists; Nuclear Reactors and Nuclear Power) Moscow, Atomizdat, 1959. 707 p. (Series: Its: Trudy, vol. 2) Errata slip inserted. 8,000 copies printed.

General Eds.: N.A. Dollezhal', Corresponding Member, USSR Academy of Sciences; A.K. Krasin, Doctor of Physical and Mathematical Sciences; A.I. Leypunskiy, Member, Ukrainian SSR Academy of Sciences, I.I. Novikov, Corresponding Member, USSR Academy of Sciences, I.I. Parsov, Doctor of Physical and Mathematical Sciences, and V.S. Alymbayev; Tech. Ed.: Ye. I. Kazel'.

PURPOSE: This book is intended for scientists and engineers engaged in reactor designing, as well as for professors and students of higher technical schools where reactor design is taught.

COVERAGE: This is the second volume of a six-volume collection on the peaceful uses of atomic energy. The six volumes contain the reports presented by Soviet scientists at the Second International Conference on Peaceful Uses of Atomic Energy, held from September 1 to 13, 1958 in Geneva. Volume 2 consists of three parts. The first is devoted to atomic power plants under construction in the Soviet Union; the second to experimental and research reactors, the experiments carried out on them, and the work to improve them; and the third, which is predominantly theoretical, to problems of nuclear reactor physics and construction engineering. Yu. I. Koryakin is the science editor of this volume. See SOV/2081 for titles of all volumes of the set. References appear at the end of the articles.

24 (6)

AUTHOR: Feynberg, S. M. (Moscow)

SOV/179-59-4-13/40

TITLE: The Principle of Maximum Stress

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye tekhnicheskikh nauk. Mekhanika i mashinostroyeniye, 1959, Nr 4, pp 101 - 111 (USSR)

ABSTRACT: Some ideas and results are put forward which are contained in the author's doctor's dissertation "The Principle of Maximum Stress " (Printsip predel'noy napryazhennosti), Moscow, at the Institut mekhaniki AN SSSR (Institute of Mechanics of the AS USSR), 1946. In 1948, the author only publishei short excerpts from his dissertation in the paper (Ref 4). A perusal of current publications showed that the author's investigations have kept their value up to date. The author's opinions were greatly influenced by the papers of A. A. Gvozdev (Refs 1, 2) on the application of the boundary equilibrium to statically indeterminate systems, and by the paper of I. Ya. Shtayerman (Ref 3). It is shown here that the limiting break-stress principle can be taken as a starting point for the development of the mathematical theory of elasticity, and that the two classical plasticity theories of Saint-Venant and Genki-Mieses can be interpreted as a consequence of this principle. Methods

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of finding a direct solution of the maximum resp. minimum problem in the strength functional are pointed out, namely the method of approximation of the state of limiting stress, e. g. by polynomials with the least deviation from zero, the method of approximation of the given law of strength by the succession of "inscribed" and "circumscribed" boundary conditions, the method of building up the majorant functional of body strength in evaluating the latter "from above", and the combined method.- It is pointed out that the efficiency of these methods was checked by applying them to numerous problems of plastic flow of round and rectangular plates and slightly flat shells. There are 6 Soviet references.

SUBMITTED: July 23, 1958

S/089/60/008/06/01/021
B006/B063 82302

21.1910

AUTHORS: Feynberg, S. M., Konobeyevskiy, S. T., Dollezhal', N. A., Yemel'yanov, I. Ya., Tsykanov, V. A., Bulkin, Yu. M., Zhirnov, A. D., Filippov, A. G., Shchipakin, O. L., Perfil'yev, V. P., Samoylov, A. G., Ageyenkov, V. I.

TITLE: The CM(SM) Research Reactor With a Capacity of 50 Mw

PERIODICAL: Atomnaya energiya, 1960, Vol. 8, No. 6, pp. 493-504

TEXT: The present article gives a detailed description of the Russian 50-Mw research reactor which has a neutron flux of $2.2 \cdot 10^{15}$ n/cm^{2}sec. It is used both for research work in nuclear physics and reactor engineering; obtaining of new transuranic elements, testing of fission and building materials under neutron and gamma bombardment, within the temperature range 20°K - 2000°C, and in various media; spectrometric examination of intermediate neutrons; examination of the gamma spectrum of the (n,γ) reaction; examination of short-lived isotopes and neutron diffraction analyses. The authors first discuss some characteristic data.

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The CM(SM) Research Reactor With a Capacity of 50 Mw

S/089/60/008/06/01/021
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The water-cooled, reflected reactor works with U^{235} enriched to 90%. The critical mass (without the experimental holes) is 7.3 kg of U^{235}, and including the experimental holes, it amounts to 9.5 kg (loading: ~11.7 kg). The maximum heat flow from the fuel element attains $5.5 \cdot 10^6$ kcal/m^2.h; the surface temperature does not exceed 195°C. Fig. 1 shows the distribution of the neutron flux in the cross section of the reactor; the flux has two maxima, one in the center of the cooling-water cavity ($2.2 \cdot 10^{15}$), and the other in the lateral reflector (5.10^{14} n/cm^2sec). The flux/power ratio is $4.4 \cdot 10^{10}$ n/cm^2.sec.kw. With a 25% submersion depth of the fuel elements, the reactor can be in continuous operation for a period of 60-65 days. Several details are dealt with next. Experimental holes: The reactor has five horizontal and fifteen vertical holes. The horizontal ones are in the central part of the active zone, whose longitudinal and cross sections are shown in Figs. 2,3. At the output of the holes the neutron flux amounts to ~3.10^{10} n/cm^2sec. The vertical holes are located in the reflector with the exception of the central ones. Three of them serve for obtaining transuranic elements (one of these being in the center), two low-temperature holes serve for metal

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tests, two high-temperature holes for the testing of fuel elements, chemical analyses of the cooling water, and corrosion tests. All of these holes are water-cooled. Furthermore, five gas-cooled holes serve for testing fission and building materials in the range of 0 - 600°C; one hole (cooled with helium gas or liquid H_2) serves for material tests at low temperatures; one gas-cooled hole for material tests at ~2000°C; one hole cooled with liquid metal (1000°C) for testing fuel elements and coolants. Construction: The following demands were made on construction: creation of a small active zone that would withstand high thermal loads for a long time, and its cooling; application of a maximum number of experimental holes (their distribution is shown in Fig. 3); possible exchange of fuel assemblies without pressure drop. Figs. 2-5 illustrate particulars of the construction. Reactor body and cover: Fig. 2 is described. The cylindrical part is made of 36 mm thick stainless steel of the grade 1Kh18N9T (1Kh18N9T). The reflector consists basically of beryllium oxide; it is made up of blocks comprising about 65 different types, which are enclosed by steel plates on top and at the bottom. Fuel element assemblies: The element itself has the shape of a plate with a

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The CM(SM) Research Reactor With a Capacity of 50 Mw

S/089/60/008/06/01/021
B006/B063 82302

core, pressed from uranium oxide powder and electrolytic nickel; the core is contained in a nickel can. Fig. 6 shows a section through the assembly, Fig. 7 another through a fuel element. Data of one such element are compiled; every element contains 12.5 g U^{235}. The cylindrical body shield (Fig. 2) divides the inner reactor cavity into two zones. The functions of this shield are briefly discussed, and the cooling water circulation is described next. The control system is described in greater detail. This system consists of two automatic regulators with two regulation rods each, four shim rods, and four safety rods which can also be used as shim rods. The automatic regulation is operated by 13 ionization chambers located outside the reactor body; it covers the power range from 0.5 to 100%. Several details concerning safety and shim rods are thoroughly discussed. Reactor shield: Fig. 8 shows a cross section through reactor plus shield. The latter consists of steel and heavy concrete. A few details are described, and the pr[illegible]ss of fuel extraction is briefly dealt with. The cooling system is finally discussed. It consists of four closed, separate loops. The water is kept flowing by circulating pumps (500 t/h, 10 atm); the heat exchange power is 15 Mw.

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The CM(SM) Research Reactor With a Capacity of 50 Mw

S/089/60/008/06/01/021
B006/B063 82302

There are 8 figures and 1 Soviet reference.

SUBMITTED: March 15, 1960

Card 5/5

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KANAYEV, Andrey Andreyevich; FEYNBERG, S.M., retsenzent; AL'KIMOVICH, A.V., inzh., retsenzent; KUDANOV, N.N., inzh., nauchnyy red.; SMIRNOV, Yu.I., red.; KAMOLOVA, V.M., tekhn. red.; SHISHKOVA, L.M., tekhn. red.

[Atomic power plants] Atomnye energeticheskie ustanovki. Leningrad, Sudpromgiz, 1961. 427 p. (MIRA 15:4)

1. Chlen-korrespondent Akademii nauk SSSR (for Feynberg).
(Atomic power plants)

FEYNBERG, S. M.

PHASE I BOOK EXPLOITATION SOV/6176

Konobeyevskiy, S. T., Corresponding Member, Academy of Sciences USSR, Resp. Ed.

Deystviye yadernykh izlucheniy na materialy (The Effect of Nuclear Radiation on Materials). Moscow, Izd-vo AN SSSR, 1962. 383 p. Errata slip inserted. 4000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye tekhnicheskikh nauk; Otdeleniye fiziko-matematicheskikh nauk.

Resp. Ed.: S. T. Konobeyevskiy; Deputy Resp. Ed.: S. A. Adasinskiy; Editorial Board: P. L. Gruzin, G. V. Kurdyumov, B. M. Levitskiy, V. S. Lyashenko (Deceased), Yu. A. Martynyuk, Yu. I. Pokrovskiy, and N. F. Pravdyuk; Ed. of Publishing House: M. G. Makarenko; Tech. Eds: T. V. Polyakova and I. N. Dorokhina.

Card 1/24

The Effect of Nuclear Radiation (Cont.) SOV/6176

PURPOSE: This book is intended for personnel concerned with nuclear materials.

COVERAGE: This is a collection of papers presented at the Moscow Conference on the Effect of Nuclear Radiation on Materials, held December 6-10, 1960. The material reflects certain trends in the work being conducted in the Soviet scientific research orginization. Some of the papers are devoted to the experimental study of the effect of neutron irradiation on reactor materials (steel, ferrous alloys, molybdenum, avial, graphite, and nichromes). Others deal with the theory of neutron irradiation effects (physico-chemical transformations, relaxation of internal stresses, internal friction) and changes in the structure and properties of various crystals. Special attention is given to the effect of intense γ-radiation on the electrical, magnetic, and optical properties of metals, dielectrics, and semiconductors.

Card 2/[illegible]

4

TABLE OF CONTENTS:

FEYNBERG, Saveliy Moiseyevich, doktor fiziko-matem. nauk, laureat Leninskoy premii; KANTER, A.I., red.; NAZAROVA, A.S., tekhn. red.

[The peaceful atom] Mirnyi atom. Moskva, Izd-vo "Znanie," 1962. 29 p. (Narodnyi universitet kul'tury. Tekhniko-ekonomicheskii fakul'tet, no.18) (MIRA 15:2)
(Atomic energy)

FEYNBERG, Saveliy Moiseyevich, doktor fiziko-matem. nauk, laureat Leninskoy premii; NEKHLYUDOVA, A.S., red.; NAZAROVA, A.S., tekhn. red.

[The atom and the atomic nucleus] Atom i atomnoe iadro. Moskva, Izd-vo "Znanie," 1962. 30 p. (Narodnyi universitet kul'tury: Estestvennonauchnyi fakul'tet, no.23) (MIRA 15:2)
(Atoms) (Nuclei, Atomic)

L 4038-66 EWT(l)/EWT(m)/EPF(c)/ETC/EPF(n)-2/EWG(m)/T/EWP(t)/EWI(b)/EWA(h) INP(c)
JD/WW/GS

ACCESSION NR: AT5023781 UR/0000/62/000/000/0021/0033

AUTHOR: Feynberg, S. M.

TITLE: The SM research reactor and its use for metal and solid state research

SOURCE: Soveshchaniye po probleme Deystviye yadernykh izlucheniy na materialy. Moscow, 1960. Deystviye yadernykh izlucheniy na materialy (The effect of nuclear radiation on materials); doklady soveshchaniya. Moscow, Izd-vo AN SSSR, 1962, 21-33

TOPIC TAGS: nuclear research reactor, neutron irradiation, neutron diffraction, water cooled nuclear reactor, solid state research facility, metallurgic research facility

ABSTRACT: After discussing the requirements which should be met by research nuclear reactors, the author shows that a water-moderated reactor with a coolant operating on intermediate neutrons with a neutron trap, represents an economic solution to two problems simultaneously: production of high intensity thermal and fast neutron fluxes. The ideas discussed were embodied in the design of the SM research reactor having a heat power of 50,000 kw; the construction of this reactor is now very close to completion, and is described in detail together with its operation. In studies of materials and solid state

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ACCESSION NR: AT5023781

physics research, use will be made of gas-cooled channels placed in the zone of the hard neutron spectrum, and also water-cooled channels placed in the reflector. Neutron diffraction studies will be conducted in a horizontal channel. Other channels will permit studies covering the temperature range from liquid helium to 600C and higher. Fourteen topics of research in solid state physics which are planned with the aid of the SM reactor are enumerated. Orig. art. has: 8 figures.

ASSOCIATION: None

SUBMITTED: 18 August 62 ENCL: 00 SUB CODE: NP, SS

NO REF SOV: 000 OTHER: 000

Card 2/2

FEYNBERG, S. M.; TSYKANOV, V. A.; VOROBYEV, Yc. D.

"Reactor SM-2 with the Highest Available Neutron Flux."

report submitted for 2nd Intl Conf, Peaceful Uses of Atomic Energy, Geneva, 31 Aug-9 Sep 64.

FEYNBERG, S. M.; SHEVELEV, Ya. V.

"The pulse reactor potentialities, (for neutrino investigations 1)."

report presented at the 3rd Intl Conf on Peaceful Uses of Atomic Energy, Geneva, 31 Aug-5 Sep 64.

EWT(m)/EPF(c)/EPF(n)-2/EPR Pr-4/Ps-4/Pt-4 DM

AP5001267

[illegible], S. M., Dolgov, N. A., [illegible], Ivanov, I. Ya., Gryazov, V. M., [illegible], Yu. M., [illegible], Averiyanov, P. G.

Physical and exploitational characteristics of the SM-2 [illegible] for 19

SOURCE: Atomnaya energiya, v. 17, no. 6, 1964, 452-463

TOPIC TAGS: research reactor, reactor/SM-2, reactor characteristic, nuclear [illegible]

ABSTRACT: The paper is a summary of the SSSR # 320 report at the International [illegible] on Peaceful Uses of Atomic Energy in Geneva, 1964. The reactor SM-2 was designed for a wide range of investigations in nuclear physics, solid [illegible], metallurgy, radiation chemistry, physics and technology of nuclear [illegible] construction, and other fields of science and technology. The reactor was described in Atomnaya Energiya 8, 493 (1960). The thermal neutron flux is 2.5×10^{15} n/cm^2, sec at 50,000 kw. The fast neutron flux with energy larger

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ACCESSION NR: AP5001267

[illegible] Mev in the active zone exceeds 10^{15} n/cm^2. sec. Orig. art. has. 9 figures

ASSOCIATION: None

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L 24218-65 EWT(m)/EPF(c)/EPF(n)-2/EPR Pr-4/Ps-4/Pu-4 DM

ACCESSION NR: AP5001268 S/0089/64/017/006/0463/0474

AUTHOR: Kurchatov, I. V. (deceased); Feynberg, S. M.; Dollezhal', N. A.; Aleshchenkov, [illegible] Yemel'yanov, I. Ya.; [illegible] M. A.; [illegible] Kondrat'yev, F. V.; Lavren[illegible] [illegible] [illegible]nov, V. P.; Tal'yzin, V. M.; [illegible] [illegible]kov, P. M.; Shevelev, Ya. V.

TITLE: Pulse graphite reactor IGR

SOURCE: Atomnaya energiya, v. 17, no. 6, 1964, 463-474

TOPIC TAGS: pulse graphite reactor, high neutron flux pulse, nuclear reactor

ABSTRACT: The paper is a summary of the SSSR #322a report at the International Conference on Peaceful Uses of Atomic Energy in Geneva, 1964. It represents an elaboration of the description of the pulse graphite reactor IGR given by S. M. Feinberg at the Second International Conference. The pulse reactors are used when a high neutron flux is desirable. The described reactor was in opera-